

PHILADELPHIA MEDICAL TIMES.

SATURDAY, JUNE 28, 1873.

ORIGINAL COMMUNICATIONS.

CASES OF CEREBRO-SPINAL FEVER, WITH REMARKS.

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DURING the last three months eight cases of this disease have been admitted into the medical wards of the Pennsylvania Hospital. Of these, six have proved fatal, one has ended in recovery, and one is still under treatment. The patient remaining in the ward is now fully convalescent, but the percentage of mortality has been so great, that there is reason to believe that the epidemic at present prevailing in the city, if not wide-spread, is very fatal in its character. The disease does not, however, seem to be confined to any particular locality, for the four patients who were under my immediate care, and whose histories I shall presently report, came from very different parts of the city. One had recently arrived from New York, and was taken sick on board ship. Another lived at Twenty-fourth and Lombard, a third at 315 South Seventh Street, and the last was attacked while at a sailors' boarding-house in the lower part of the city.

Most of the symptoms described by authors who have written upon this disease were present in the cases treated by me. In only one case, however, was there any eruption, and in this case, although said to have been distinct at one time, it was fading when the patient came under my care. The absence of the eruption in a large number of cases certainly justifies the abandonment of the name of spotted fever, by which the disease is even yet familiarly known. It is not, however, sufficient to authorize the removal of the disease from the class of general diseases to that of local inflammations: it is, therefore, satisfactory to find that the Committee on Nomenclature of the American Medical Association propose the name of cerebro-spinal fever, a name which at the same time indicates the general characters of the disease and the seat of the principal local lesions.

It is, unfortunately, too true that cerebro-spinal fever seems to be little amenable to treatment. In the first two cases quinine in twelve-grain doses was given, apparently without much effect upon either the pulse or temperature. The bromide of potassium, which was used in all the cases, seemed to have the power of diminishing the headache and restlessness, but exerted no further control over the disease. Opium in moderate quantities was resorted to in one of the cases, but its use was soon abandoned because it apparently increased the tendency to stupor. The most marked results followed the application of wet cups and of ice to the nape of the neck. In the single case in which they were used there was no subsequent complaint of pain. The long-continued use of ice is, however, not unat-

tended with inconvenience; for after it had been applied for a few days the ears of the patient were found to be slightly frosted. In Case No. 4 ergot was prescribed, in the hope that, the inflammatory condition of the membrane of the brain and spinal cord having subsided, there remained only a congested condition of the vessels, which would be overcome by its use. Stimulus was ordered only when the general prostration of the system seemed to demand it. It was never given in the early stages of the disease. Remissions occurred in two of the cases. In the first case the subsidence of the febrile symptoms and of the pain, and the diminution of the mental hebetude, were so marked that I was twice led to believe that the patient was about to enter upon convalescence.

In the three cases in which death occurred and post-mortem examinations were made, in addition to the marked changes found within the cranium and spinal canal, alterations in color and diminution in consistence of the liver and spleen were very noticeable features; and this goes far to confirm the view that, while the lesions of the cerebral and spinal membranes are an essential part of the disease, —as essential perhaps as the pustular eruption in variola or the ulceration of Peyer's patches in enteric fever,—they do not in themselves and alone constitute the disease.

Case 1.—Intense Headache—Violent Delirium—Retraction of Head—Death in Four Weeks—Injection of Membranes of the Brain and Spinal Cord.

P. G., aet. 28, born in England, a sailor, and unmarried, was admitted into the medical wards March 15, 1873.

The following history was obtained. About an hour or two before admission, he was seized with severe headache, and soon afterwards became violently delirious. He did not have a chill or convulsion. On admission the patient is semi-comatose, the pupils are contracted and do not respond promptly to light, and the neck is slightly retracted and rigid. He has fever, but a slow pulse, less than 60 in the minute. A loud but soft systolic murmur is heard over the heart, having its point of greatest intensity at the apex. There is no eruption of any kind visible. The urine, upon examination, was found to be acid, to have a specific gravity of 1036, to contain a trace of albumen, but no tube-casts.

March 16.—The patient was so noisy and restless last night as to make it necessary to remove him from the ward to the cells, and to strap him to the bed. His headache gives him the appearance of stupor, and renders him indisposed to be disturbed; but when roused he answers questions correctly, although slowly. The tongue is heavily coated with a soft velvety fur, but is moist; the bowels are loose, probably the effect of the croton oil given him by the resident physician who received him. The face is dusky, and the capillary circulation everywhere very sluggish. He was ordered twelve grains of sulphate of quinine daily, and twenty grains of bromide of potassium, three times a day, with a sufficient quantity of beef-tea.

March 17.—Cerebral symptoms unchanged; bowels are no longer loose. Neck still rigidly retracted. Restlessness continues. Tongue still heavily coated. Patient does not complain of pains in his limbs, and there is no marked hyperesthesia of the surface.

March 19.—A marked improvement in the patient's

condition has taken place. He is perfectly conscious, but does not remember much about the beginning of his illness. The tongue has thrown off its fur. The headache has diminished in intensity, but the pain in the nape of the neck, and the rigidity, still continue; the retraction is, however, less. There is also a tendency to defervescence as shown by the thermometer.

March 21.—To-day the patient's temperature is normal, and the symptoms generally indicate that he is entering upon convalescence.

March 23.—The improvement noted on the 21st was of short duration. To-day the symptoms denote a relapse. There are marked mental hebetude, severe headache, and rigidity of neck. The pulse, which has hitherto maintained a certain degree of fulness and firmness, is to-day weak and compressible: it remains still infrequent. The heart-murmur still continues, with the same character as when first heard. The patient was directed to take three ounces of whisky daily.

March 25.—There is again to-day a fall in the temperature and a subsidence in the severity of the other symptoms. A tendency to constipation exists, to relieve which enemata are employed.

March 31.—All the previous symptoms have returned in full force; the mental hebetude, headache, occasional delirium, retraction of the head, and coating of the tongue, are as marked as before. The pulse, which has been up to this time unusually infrequent, is now over one hundred, and a very slight exertion is sufficient to cause an increase of from ten to twenty beats in the minute. The respiration still continues about normal. The use of the quinia was discontinued, and opium prescribed in grain doses every four hours.

April 8.—There has been little to note since the 31st ult. It is evident to-day, however, that the patient is gradually sinking. He lies upon his back, with his eyes half open; the stupor is more marked than it has ever been before, the tongue is still heavily furred, the pupils are moderately dilated and contract very slowly under the stimulus of light. No paralysis of the extremities. It is sometimes necessary to introduce a catheter to empty the bladder. Constipation continues. Decubitus dorsal.

April 13.—Death took place to-day at 12 M., having been preceded by the signs of congestion of the lungs. The autopsy was made twenty hours after death. Rigor mortis well marked. The dependent portions of the body were much discolored from hypostasis of blood. The blood was everywhere found fluid and dark in color.

The veins of the scalp were engorged with blood. The vessels of the pia mater were intensely injected, especially at the base of the brain. A large amount of serous effusion was found beneath the arachnoid and in the lateral ventricles. The translucency of the arachnoid was diminished at a few points, but there were only a few places where exudation could be found. The condition of the spinal vessels and membrane was the same as that just detailed. Several flakes of calcareous matter were found beneath the arachnoid and adherent to it. The heart was normal in size; the edges of the mitral valve were thickened, and it was not entirely competent to close the auriculo-ventricular orifice. The kidneys appeared to be healthy, but the liver was small, dark-colored, and soft, permitting the finger to be passed readily through its substance. The spleen was also soft.

Case II.—Delirium—Headache—Retraction of the Head—Faint Petechial Eruption—Recovery.

John M., æt. 17, born in Philadelphia, a cart-driver by occupation, and living near Twenty-fourth and Lombard Streets, was admitted March 19, 1873.

The patient's previous health has been good, except

a slight attack of rheumatism, which did not confine him to bed. He was taken ill on the 11th inst., the first symptoms being violent pains in his temples and forehead, which were followed by high fever, nuchal pain and stiffness. He is said to have been very restless and delirious, but not violently so, and to have been the subject of hallucinations. His stomach has been very irritable; his bowels have been constipated. A faint petechial eruption was observed, two days after the beginning of his illness, on the face, abdomen, and limbs.

There have been occasional spasmodic contractions of the muscles of the arms, and shooting pains in the extremities. There has also been, it is said, a moderate amount of suffusion of the eyes.

On admission, the tongue is heavily coated; the pulse 90; the temperature 102°; and the respiration 24. Over the abdomen and on the inside of the thighs the traces of a petechial eruption may still be seen. The head is retracted, and there is still some headache. The urine is acid, and free from albumen; its specific gravity is 1024. The patient was directed to have quinia, gr. xii, daily, and bromide of potassium, gr. xx, three times a day.

March 20.—The patient's intellect is quite clear. There is no paralysis of the limbs, bladder, or rectum, and no marked hyperesthesia of the surface. The temperature shows a tendency to fall, and there is every reason to believe that he is entering upon convalescence.

March 27.—On the 22d the temperature was normal; the quantity of quinia was reduced to six grains daily, and the use of the bromide discontinued. To-day the quinia is replaced by Basham's mixture and Linck's extract of malt.

April 11.—The patient has continued to improve since the date of the last note, and is to-day discharged at his own request. Since his admission a younger brother has died of the disease, at his own home, after only a few hours' illness.

May 20.—The patient has recently been heard from. He is in the enjoyment of his usual health, and at his former occupation.

For notes of the following case I am indebted to Dr. Frank Woodbury, one of the resident physicians at the Pennsylvania Hospital.

Case III.—Profound Coma—General Muscular Relaxation—Frothing at the Mouth—Death.

E. A., æt. 35, born in England, a sailor, and unmarried, was admitted into the medical wards of the Pennsylvania Hospital, April 16, 1873, in a condition of profound coma. The following history was obtained from his shipmates who brought him to the hospital:

On the evening of the 14th inst. he complained of pain in the head, from which he suffered all night. On the following morning he noticed, and called the attention of his companions to the fact, that he had lost the power of motion in the lower extremities. The intense headache continued, but little seems to have been done for his relief. At one A.M. of the 16th he became unconscious and began to breathe in a labored manner, white froth collecting about the lips. When first seen, the conjunctivæ were insensible to the touch; the pulse was full but very frequent; the respirations were stertorous, white froth still clinging to the lips; the skin was hot and moist, and exhaled a disagreeable odor, but there was no eruption. There was no rigidity of any of the muscles of the body. In the evening the pulse was 176, the respiration 42. The patient had been drinking for about a week previous to his seizure.

Death took place at four A.M. on the 17th, about sixteen hours after admission.

The autopsy was made twelve hours after death. Rigor mortis well marked; body large and well

formed. On the removal of the calvaria, numerous patches of plastic exudation were seen distributed over the surface of the hemispheres of the brain, under the arachnoid. Pus was found in the most dependent parts of the lateral ventricles, and at the base of the brain generally; a small collection had also taken place between the lobes of the cerebellum and under the arachnoid membrane. A band of lymph extended from the pons Varolii and crura cerebri to the adjacent parts. A layer of purulent lymph extended in streaks and patches along the posterior portion of the spinal cord throughout its entire extent. A few calcareous particles were found beneath the arachnoid.

Extensive pleuritic adhesion existed on the right side of the chest. The lungs were healthy. The heart was pale and contained in its cavities white fibrinous clots, but was otherwise normal. The liver and spleen were dark-colored and soft, breaking down readily under pressure. The kidneys were pale, the cortical substance being increased in thickness, apparently at the expense of the pyramids. About six fluidounces of urine were obtained from the bladder. This was found to be neutral in reaction, to have a specific gravity of 1034, and to contain albumen and granular casts, but no blood-disks. About half a pint of a dark grumous fluid without offensive odor was discovered within the stomach, which, with the exception of some ecchymotic patches on its mucous membrane, was healthy.

Case IV.—Intense Headache—Occasional Delirium—Great Hyperesthesia—Subsequent Paralysis of the Extremities—Bed-sores—Death.

J. L., at. 33; born in England, and living at the time of his seizure at 315 South Seventh Street, in this city; an unmarried man, and a paper-hanger by occupation; was admitted into the medical wards April 15, 1873.

The patient's previous health has always been good, and he is able to give us a good family history. Thirteen years ago he contracted a chancre, but he has never had any constitutional manifestations of syphilis. About thirteen weeks before admission he was taken, while living in a malarious district, with chills of the tertian type, which continued for five weeks. On the 9th inst., a week before he came under my care, he had a severe chill, followed by severe frontal headache, fever, and vomiting. His bowels have been constipated.

On admission, the patient walked into the ward. He is suffering from marked mental confusion and severe headache. His neck is rigid, and his head somewhat retracted; he has no pains in the abdomen or extremities; his tongue is furred, especially in the centre. The irritability of the stomach has passed off; the constipation continues. There is no distention of the abdomen, and no eruption of any kind discoverable on any part of the body. The pulse is slow, 56 in the minute; the first sound of the heart somewhat prolonged, but no murmur is heard over any part of the heart. The urine is acid in reaction, has a specific gravity of 1024, and contains a trace of albumen. He was ordered cut cups to the nape of the neck, ice to the back of the head, six grains of sulphate of quinia daily, and twenty grains of the bromide of potassium every four hours; beef-tea to be given freely.

April 18.—The patient evinces the same indisposition to be disturbed which was so marked a feature in Case I: he answers correctly, however, when thoroughly roused. Pupils moderately dilated, but contract fairly when exposed to the light. There is no suffusion of the eyes, but a slight degree of photophobia exists. The urine is dribbling away from him, but there is no accumulation in the bladder. Many of the symptoms have increased since his admission,—notably, the mental hebetude, retraction of the head, and the coating of the tongue. On the other hand, the headache has been entirely

relieved by the cupping, by which about twelve ounces of blood were removed. The slightest movement of any of the limbs gives rise to great agony. There is no spasmotic contraction of the muscles, but reflex sensibility is much exaggerated, while the power of voluntary motion is much diminished.

April 20.—The patient to-day can move the right leg a little, but not the left,—which is exactly the reverse of what was noticed yesterday. Movement of the limbs still continues to cause great pain, and tickling the soles of the feet is evidently acutely felt, and gives rise to reflex movements, most marked on the right side. It is difficult to say whether the inability to move the legs comes from loss of power or from dread of pain. The patient refuses all nourishment. The pulse is more frequent,—84.

April 21.—The patient has less control over the left side of the body than the right, the face even being drawn to the right, and the tongue, when protruded, turning to the left. The left pupil is larger than the right, but responds slowly to light.

April 23.—An improvement in some of the symptoms is noticed to-day, especially in the mental condition of the patient, who now makes an effort to answer questions. He can move his left leg slightly to-day. A bed-sore is forming over the sacrum. The bromide was stopped, and whisky ordered.

April 26.—The neck continues rigidly retracted. The photophobia is less marked. The pupils are equally dilated and respond more promptly to light, intelligence becoming clearer. There is no headache. The pulse is very feeble and frequent. Numerous bed-sores have formed in the neighborhood of the anus, and at other points where the skin is subjected to pressure. The glans penis is much inflamed in consequence of the constant dribbling of the urine. The bowels, which have up to this time been only moved by enemata, are now loose, and occasionally the patient has an involuntary evacuation. The left fore-arm is becoming rigidly flexed.

May 6.—A few days ago the use of the quinia was discontinued, and the fluid extract of ergot, in doses of twenty minims three times a day, which was subsequently increased to five times, was prescribed. During the last week both fore-arms have been strongly flexed upon the arms. The patient cannot move the left fore-arm, and the right is moved only to a very limited extent. He has no power to move either leg. The paralysis of the face has disappeared. In spite of constant attention, the bed-sores have increased in number and size, that over the sacrum having laid bare the bone. To prevent any further sloughing, he has been placed upon his face.

May 10.—Hemorrhage occurred to-day from a bed-sore seated over the trochanter of left femur, and before it could be arrested it was necessary to tie a small artery. Although the patient presents a pitiable spectacle to-day in consequence of his numerous bed-sores, there is evidence, from the subsidence of the pains, from the diminution of the paralysis, and from the return of control over the bladder and rectum, that he is improving, and that, provided he does not sink from exhaustion, recovery is possible.

May 18.—The bed-sores present a healthy appearance; a few have, unfortunately, formed upon the anterior surface of his body. A water-bed has been procured, upon which he is now lying. He takes a fair quantity of nourishment, which he appears to enjoy. At his own request, the whisky was a few days ago substituted by ale, of which he drinks a quart every day. Pulse is frequent; generally in the neighborhood of 120. The tongue is clear; the bowels are regular, and under his control. The ergot is replaced by the following prescription:

R. Strychniæ sulph., gr. $\frac{1}{4}$;
Acid. phosphor. dil., 10³x;
Elix. cinchonæ, f $\ddot{\text{3}}$ ss,

Four times daily.

May 20.—When the patient makes a strong effort of will, he can cause contraction of almost all the muscles of the extremities, but he is unable to move either leg from the bed. He has more control over the arms, but the movements which he is able to execute with these are slight. The contraction of the fore-arms upon the arms still continues. His mind is clear, but, although possessed of a fair degree of intelligence, he is unable to give a very clear account of the circumstances attending the commencement of his illness. He is of cheerful disposition, and bears his suffering with fortitude.

There has been at no time during his long illness any paralysis of sensation, the patient always correctly indicating the part touched.

June 16.—The patient lived until to-day, when he sank from exhaustion. The temperature continued high until his death.

June 17.—Post-mortem examination ten hours after death. The body was very much emaciated. Numerous bed-sores were distributed over the chest, sacrum, trochanter, and right knee; the sacrum being exposed. Rigor mortis was present and well marked.

Thorax.—The right pleural cavity contained a small amount of serum, and there were a few bands of freshly exuded lymph. The lung was very pale anteriorly and consolidated posteriorly. On section, the color was reddish-gray, and a fragment sank in water. At left apex there were a few old adhesions; the tissue of left lung was crepitant throughout.

Heart.—Pericardium was healthy. The heart was covered with a good deal of fat. The left ventricle was distended with a soft dark clot; the right auricle contained a white, fibrinous clot. The valves were healthy. The pulmonary artery contained dense white clot.

The stomach was healthy; the liver was pale in color and small; the gall-bladder was filled with yellow bile; the spleen was small, pale, and flabby, and the kidneys were normal in size, but flabby and rather pale. Their capsules were thickened, opaque, adhesive in places; the cortical portion was increased in thickness, but presented no other unhealthy appearance. The surface was marked with stellate veins.

Head.—Some fluid escaped on opening the skull, and still more when the brain was removed from the membranes. The dura mater was slightly congested; the arachnoid membrane covering the hemispheres had lost its transparency, especially anteriorly, and the fissures between the convolutions were filled with gelatinoid matter. At the base the injection of the vessels of the pia mater was more marked than on the convexity, and the opacity of the arachnoid less marked; the margins of the middle lobes were tightly adherent to the anterior lobes; the arachnoid around the medulla and the upper end of the cord was decidedly opaque and thickened. Outside the dura mater of the spinal cord there was a mass of gelatinoid matter very much resembling fat, but uniform in consistence, and evenly covering the membrane. This condition was most marked in the upper dorsal region. The two surfaces of the arachnoid were adherent in places. There was a deposit of lymph on the lower part of the cord on its posterior aspect, and a few calcareous plates were also found. The vessels of the pia mater were much injected.

A curious result of the post-mortem examination was the finding of the calcareous flakes beneath the membranes of the spinal cord. When these were treated with nitric acid, they were partially dissolved, with the evolution of carbonic acid. A small

gelatinous mass was, however, left after the disengagement of the gas.

The following is the record of the temperature, respiration, and pulse in three of the cases:

Case I.—Philip G.

	Morning.			Evening.		
	Temp.	Res.	Pulse.	Temp.	Res.	Pulse.
March 16,	99°	24	50	101°	24	52
" 17,	100°	18	56	102°	18	64
" 18,	101°	18	60	102°	18	60
" 19,	100°	18	60	101°	20	60
" 20,	101°	20	60	101°	18	56
" 21,	98°	18	52	98°	18	54
" 22,	99°	18	52	102°	24	54
" 23,	101°	18	54	100°	20	50
" 24,	102°	20	70	102°	24	54
" 25,	98°	18	64	100°	18	62
" 26,	99°	22	66	99°	20	72
" 27,	100°	24	64	102°	24	60
" 28,	102°	24	72	101°	18	58
" 29,	101°	18	78	101°	18	66
" 30,	103°	24	66			
" 31,	102°	18	64	102°	17	68
April 1,	99°	24	50	104°	18	78
" 2,	100°	14	52	100°	14	60
" 3,	100°	16	56	103°	18	68
" 4,	100°	18	70	100°	18	80
" 5,	103°	24	84	102°	20	70
" 6,	103°	18	84	101°	28	88
" 7,	100°	18	66	100°	18	66
" 8,	99°	18	84	101°	18	90
" 9,	98°	20	88	102°	16	120
" 10,	99°	42	96	97°	18	96
" 11,	102°	48	106	102°	48	120
" 12,	101°	52	130	103°		

April 13.—Died.

Case II.—J. M.

	Morning.			Evening.		
	Temp.	Res.	Pulse.	Temp.	Res.	Pulse.
March 19,				102°	24	90
" 20,	101°	44	80	101°	36	80
" 21,	99°	18	74	101°	24	94
" 22,	98°	24	64	100°	18	64
" 23,	99°	18	72	99°	16	80
" 24,	98°	18	72	100°	18	72
" 25,	98°	16	76	98°	18	78
" 26,	99°	18	78	99°	16	80
" 27,	99°	18	76	99°	18	74
" 28,	98°	18	70			

Convalescence complete.

Case IV.—J. L.

	Morning.			Evening.		
	Temp.	Res.	Pulse.	Temp.	Res.	Pulse.
April 16,	103°	18	66	102°	18	56
" 17,	102°	18	54	101°	18	56
" 18,	101°	34	58	102°	24	74
" 19,	102°	36	68	103°	42	80
" 20,	102°	32	80	102°	38	84
" 21,	101°	42	86	101°	48	100
" 22,	102°	52	102	102°	60	120
" 23,	101°	46	90	104°	50	120
" 24,	101°	46	104	104°	48	124
" 25,	103°	40	114	101°	48	124
" 26,	101°	34	110	102°	42	126
" 27,	102°	40	116			
" 28,	100°	36	100	105°	50	40
" 29,	101°	42	116	103°	42	124
" 30,	101°	52	98	102°	43	114
May 1,	99°	52	108	103°	43	114
" 2,	101°	40	92	103°	40	112
" 3,	101°	30	104	105°	36	124

	Morning.			Evening.		
	Temp.	Res.	Pulse.	Temp.	Res.	Pulse.
May 4,	100°	30	98	105°	42	120
" 5,	100°	36	100	104°	42	130
" 6,	99°	36	100	105°	42	150
" 7,	98°	50	112			
" 8,	100°	36	116	105°	40	134
" 9,	101°	40	116	104°	42	130
" 10,	101°	42	120	103°	48	130
" 11,	99°	40	104	104°	46	140
" 12,	102°	36	112	101°	42	112
" 13,	101°	50	124	101°	50	124
" 14,	102°	40	120	101°	52	124
" 15,	100°	48	120			
" 17,				104°	50	130
" 18,	99°	36	104			
" 19,	104°	44	114	102°	48	132
" 20,	99°	30	108			

LOCAL CONGESTIONS IN A CASE OF AGUE.

BY H. G. LANDIS, M.D.,
Niles, O.

THE following case is one of some interest, as exhibiting some of the congestive phenomena of intermittent fever, and is reported not for its unusual character, but as illustrating certain points in the clinical history of the disease.

August 1, P.M.—Called to see M. J., æt. 40, intemperate, but a strong, vigorous man. His history was to the effect that he had been drinking excessively but had to-day stopped abruptly. He was alternately sitting and reclining on a lounge, and was delirious. The delirium was not violent, but cheerful, save that he required considerable persuasion to induce him to remain in the house. His skin was of natural warmth and moisture. Pulse full and slow—60 to the minute; tongue smooth and moist; slight tremor of the hands. There was no history or evidence of an antecedent chill. He was ordered chloral, gr. x, potassii bromidi, gr. xv, every hour until he slept.

August 2, P.M.—Has felt well all day, having completely recovered from all of yesterday's symptoms.

August 3.—At sunrise, while a heavy dew was on the ground, he went into his garden to weed. At 11 A.M. he had a slight chill, followed by fever. Called to see him at 3 P.M. Complains of violent headache, and pain in the chest, with cough. Eyes suffused; skin pungently hot. Pulse 90 per minute, quick and hard. Respiration hurried. Expectorates white mucus. On auscultation found exaggerated vesicular murmur over lower half of each lung, and distinct râles over base of right lung anteriorly. Applied mustard to chest, and gave tinct. verat. virid. Mij, to be repeated in three-quarters of an hour, and again in three hours.

August 4, A.M.—Found, much to my surprise, that, having rested well during the night, he was now in his usual state of health. No trace of trouble remained in the lungs. Skin moist. Eyes clear. Pulse 54. On the following day he had a severe chill at 10.30 A.M. which lasted a half-hour, and was followed by fever. Quinine was at once given, with arsenic and iron, and he had no further return of malaria.

As regards the first attack, I am still unable to see why there should have been, under the circumstances, any need of a differential diagnosis between delirium tremens and ague; and yet, in view of the subsequent phenomena, it may justly be questioned whether the patient had delirium tremens, and

whether the delirium was not merely an evidence of a congestion of the brain caused by the paroxysm of ague. So far as my own observation extends, the chill of ague is never so marked when the internal congestion accompanying it is limited to a particular organ, as it is when the congestion is more generally diffused. I have seen a case where the patient became comatose at once without any chill at the time, the paroxysm seeming to expend its whole force on the brain. To this class, perhaps, belong the malarial neuralgias, and the pleuritic and other pains of the "dumb ague," where the attack is not in sufficient force to cause that general internal congestion which constitutes the chill, and causes instead local congestion, manifested by pain in the affected structure.

In the second attack the chill was slight, and yet the paroxysm was so violent as to cause sufficient congestion of the lungs to develop a crepitant râle. There is, however, an unknown factor in this problem. The intensity of the chill is practically no guide to the force or extent of the congestion. There is evidently a subjective disposition which determines this. Coma occurring in a paroxysm of intermittent fever is not an evidence of "pernicious fever;" for the same cause will give the patient's neighbors simple intermittents. It merely shows a pernicious disposition in the patient to a violent local congestion in place of the more general form.

June 2, 1873.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF DR. H. ALLEN.

Reported by J. WM. WHITE, M.D., Resident Surgeon.

SYPHILITIC ULCERATION OF THE LARYNX—DYSPNEA—TRACHEOTOMY—DEATH.

E LIZA FLEMING, æt. 46, was admitted to the hospital wards on April 18, suffering from dyspnoea, which was found on laryngoscopic examination to be caused by an ulceration of the left vocal cord. She was a victim of constitutional syphilis, and had at the time osteoscopic pains, periosteal nodes, and other manifestations of the disease.

Treatment was commenced at once by the daily application to the ulcer of a sixty-grain solution of nitrate of silver, the use of atomized inhalations of muriate of ammonia and morphia, and the administration of large doses of iodide of potassium. She seemed for some time to be improving under this treatment, but at about half-past five on the morning of May 22 she was discovered by the nurse to be insensible, breathing with great difficulty and apparently in the last stage of suffocation. I was immediately sent for, and on reaching the patient found her entirely comatose and almost pulseless, with cold extremities, distended jugulars, and intense cyanosis. Reflex action was completely abolished: the heart-beats were so frequent that it was impossible to count them, and the respiratory efforts were faint, gasping, and incomplete, occurring only about eight or ten times a minute.

As the necessity for prompt action was evident, I immediately performed tracheotomy and inserted a tracheal tube. No difficulties were met with during the operation, and not more than twenty or thirty drops of blood were

lost. Improvement commenced at once: her respirations increased in frequency and fulness, the pulsations of her heart became firmer and more regular, and in half an hour she was breathing thirty-eight times a minute, with a pulse of 150. Her conjunctivæ now responded to irritation, but she still had paralysis of the left side of the face, which continued for thirty-six hours.

She was then carefully removed to a separate apartment, the temperature of which was raised to 80° , and a stream of the vapor of lime-water from an atomizer was directed towards her face and neck. She breathed entirely through the tube, no air whatever passing through her mouth or nostrils.

About eight o'clock, two hours after the operation, an accumulation of mucus in the trachea caused her pulse and respirations to run up in frequency and her inspirations to become shortened and labored. The administration of a tablespoonful of whisky-and-water, which was swallowed, brought on, as was desired, a fit of coughing. The mucus was expelled through the tube, and the condition again improved. At nine o'clock her pulse was 120, respirations 27. Injections of milk and whisky were given at short intervals, and at about ten o'clock she for the first time showed signs of consciousness, opening her eyes when spoken to. Pulse 120, respirations 22. At 10.30 she had a very severe spell of coughing, during which the tube was ejected from the trachea, together with a large quantity of bloody, tenacious mucus. An additional quantity of the same material was brought away by the introduction of a finger into the trachea, and the tube was then replaced.

During this paroxysm the cyanosis, which had almost disappeared, returned; consciousness was again lost, the pulse ran up to 132, and the respirations to 42, becoming incomplete. She continued in this condition, with marked congestion of the face and neck, until 12.30, when she once more showed signs of consciousness, and the cyanosis began to diminish. Pulse 129; respirations 33, and somewhat fuller. She had been taking hourly an ounce each of whisky and milk by the rectum. When it was necessary to excite coughing to effect the expulsion of mucus from the trachea, a spoonful of whisky by the mouth was always found to have the desired effect. Her general condition improved during the day; cutaneous sensibility returned, the cyanosis disappeared, and she showed a disposition to talk rationally. The pulse remained about 120, and the respirations from 22 to 24 per minute.

At 6.30, in a paroxysm of cough, the tube was again expelled, but on this occasion there seemed to be none of the dyspnoea which was observed when the same accident occurred previously, and it was discovered that she was breathing partly through her mouth. The tube was replaced without any trouble, by using the forefinger as a guide to the edge of the tracheal opening.

She was taking at this time a half-ounce each of whisky, milk, and lime-water, and from one to two ounces of beef-tea, on alternate hours. As there was some irritability of the rectum, most of these doses were given through the mouth, and were accompanied by more or less coughing, which seemed rather to relieve the patient than to exhaust her. The mucus which was discharged now was much less tough and tenacious than it had been, and was becoming slightly purulent.

Deglutition apparently gave her a great deal of pain; but we discovered that we could diminish the difficulty of the act by gently bringing the internal extremity of the tube towards the anterior tracheal wall, thus probably removing its pressure from the oesophagus. She slept quietly through the night, taking without any trouble the nourishment and stimulus which were given, and appearing when awake to be perfectly conscious and rational. Skin moist and warm. Pulse 120, respirations 26.

23d.—Beef-tea and the mixture of milk, lime-water, and whisky were given hourly during the day. The patient's condition remained about the same, with perhaps a little failure in strength, and a slight tendency to drowsiness, verging on stupor. The pulse was still 120, respirations 25 to 30. She expectorated frequently, bringing up large quantities of mucus, now decidedly purulent. Towards night she grew uneasy and restless, her respirations became jerking and irregular, and ran up to 42 per minute. Pulse 134. Return of the venous congestion of the face and neck.

At this time a portion of the food which was given her through the mouth began to be returned through the tracheal tube after an attempt at deglutition. This was at first attributed to a paralysis of the glottis and epiglottis permitting the liquids to trickle through the larynx and into the trachea; but it was subsequently found that the more probable cause was an extensive œdema of the posterior laryngeal walls, which by occluding the oesophagus forced the food into unnatural channels. It was still impossible to nourish her through the rectum, as even the smallest quantities of the most unirritating substances were at once rejected.

24th.—Early in the morning several severe coughing-spells greatly exhausted the patient; her pulse attained a frequency of 142, and her respirations became gasping and irregular. Once or twice during the day she seemed to rally and gather strength; but, in spite of the injection of large quantities of stimulus and concentrated nourishment, she sank again, her pulse became dicrotic, her breathing incomplete and limited to a small area over the upper part of the chest, and her skin cold and clammy. Coma returned, involuntary evacuations from the bladder and rectum took place, and the purplish hue of the face and neck steadily deepened. She died at noon on the following day, 25th, having survived the operation seventy-eight hours.

Post-mortem Examination.—*Brain*.—General œdema of the brain-substance, and slight congestion of the membranes, with a large serous effusion beneath them and into the ventricles.

Lungs.—Extensive hypostatic congestion of the posterior surfaces on both sides, but no evidences of pneumonia or even of bronchitis.

Kidneys.—Large, white, and fatty, with diminution of cortical substance, especially on left side.

Liver.—Hardened, enlarged, and irregular, with evidences of chronic interstitial hepatitis.

The rest of the abdominal and thoracic viscera were healthy.

On opening the larynx, a large elliptical ulcer, some four or five lines in width, was found on the left side, extending along the vocal cord from the receding angle of the thyroid to the base of the vocal process, which was ulcerated and necrosed. The vocal cord of the right side, the false vocal cords, and the ventricles of Morgagni were healthy, and there was no involvement of the epiglottis. The mucous membrane on the posterior laryngeal walls was highly œdematous, and was filled with an effusion of semi-plastic lymph.

As syphilitic disease of the throat usually spreads from above downwards, and ulceration with partial destruction of the epiglottis is so constantly a forerunner of laryngeal ulceration, its entire freedom from involvement in this case is an interesting feature.

The probable cause of death was the cerebral œdema.

TREATMENT OF DIABETES BY ARSENIC (La France Médicale, March 19, 1873).—M. Devergie recommends the employment of an arsenical treatment in cases of diabetes, and has satisfied himself of its good effects even when no restrictions were laid upon the diet and farinaceous articles were freely taken.

TRANSLATIONS.

BLOOD-LETTING.

THE following, from a very recent number of the *British Medical Journal*, has seemed to us of sufficient importance to be worthy of a prominent place in our issue:

"We gladly welcome such researches as have been lately published by Bauer in the *Zeitschrift für Biologie*, whose experiments were made for the purpose of discovering what changes occur in the metamorphosis of albumen and fat in the body after venesection. One would expect *a priori* that the withdrawal of a quantity of blood, by merely lessening the amount of albuminous substances in the body, would be followed by a diminution in the daily metamorphosis. So far from this being the case, however, Bauer finds that the quantity of albuminous bodies decomposed daily in the organism is invariably increased by blood-letting, and the excretion of the urea which is formed by their decomposition is consequently augmented. Notwithstanding this, however, much less oxygen is consumed than before, so that the substances into which albumen splits up cannot undergo such perfect combustion as before the venesection. One may readily understand this, for it is the red blood-corpuscles which carry oxygen throughout the body; and when their number is lessened by blood-letting, combustion in the tissues can hardly go on so rapidly as before. The decomposition of albumen in the body is altogether independent of the oxygen consumed in it. Now, fat is one of the substances formed by this decomposition; and, as its formation is increased and its combustion lessened, to say nothing of the fat taken as food, it must accumulate in the body: and this it actually does, as was well known to the phlebotomists of former days, whose writings contain many a record of cases where patients became enormously fat after copious blood-lettings. The same thing is seen in a milder form almost every day in the case of chlorotic girls, on whose bodies fat becomes deposited, because they have too few red blood-corpuscles to carry to it the oxygen required for its combustion. In many localities, too, cattle-breeders have become acquainted with the fact, and they increase the quantity of fat formed by their animals either in the shape of butter yielded by their milch-cows, or accumulated on the bodies of the oxen they wish to fatten by bleeding them from time to time.

"In diseases such as pneumonia, blood may be drawn for the purpose of diminishing temperature or of lessening dyspnoea. It may be supposed that Bauer's experiments support the use of blood-letting for the former purpose; but this is not the case, for the fall of temperature which blood-letting produces takes place immediately, and is soon over, while combustion does not diminish till some hours have elapsed. The fall of temperature is, therefore, due to another cause,—viz., the relaxation of the superficial vessels allowing the blood to cool more readily; but temperature can be reduced much more quickly and effectively by the cold douche or a wet sheet; and increased transformation of albumen, with diminished oxidation, is not unlikely to lead to a fatty degeneration of important organs.

"The relief which venesection generally affords in dyspnoea probably depends in part on its effect in cooling the body, for Fick and Goldstein have shown that increased temperature of the blood is sufficient to produce dyspnoea. This is a real benefit; but it would be attained as well by the use of the wet sheet, and a second cause of the subjective relief after blood-letting is by no means so desirable. The loss of blood, according to Traube, diminishes the irritability of the medulla oblongata, which is the centre of innervation for the

respiratory muscles, and, by thus producing a sort of narcosis in this part of the nervous system, deprives it of its power to appreciate rightly the respiratory wants of the body. A third way in which it may prove useful in dyspnoea is by lessening the resistance, which hinders the right ventricle from emptying itself completely, and, by thus facilitating the circulation in the lungs, may assist respiration. The author considers that this condition will only last until as much fluid has been absorbed into the vessels from the tissues as will restore the blood to its former volume; but of this we are not quite sure.

"Lastly, he says it is not to be denied that the danger arising from serous exudations in important organs, as well as of congestion of the brain or lungs, may be temporarily averted by general blood-letting, in consequence of the absorption of fluid into the vessels which it occasions. This observation has been too often made to leave any doubt upon the subject; but as often has it been noticed that the danger of these conditions recurring increased after every venesection. (Edema is to a great extent dependent on weakness of the vaso-motor nerves (see this Journal, June 15, 1872, p. 644); and, this weakness being increased by blood-letting, the edema is of course more likely to recur. Bauer, however, gives a case which shows most strikingly the immediate benefit produced by blood-letting in a case of edema of the lungs; and we are inclined to think that the weakness of the vaso-motor nerves which might lead to a recurrence of the edema might be successfully combated by a vaso-motor tonic, such as digitalis. While this shows that immense benefit may be derived from its use in proper cases, the effects which it produces on the tissue-change in the organism teach us that it is not a remedy to be thoughtlessly used, but one which must be employed only after due consideration and with watchful care."

AN IMPROVED TONSILLOTOME.

THE instrument represented in the accompanying cut was suggested by Dr. J. S. Billings, assistant-surgeon U.S.A., to D. W. Kolbe, Philadelphia, and was ordered for the Medical Department of the Army.

The advantages claimed for the instrument consist in—

1. The simplification of the mechanism, its lightness, its never failing to cut, and its being easily kept in order.

2. Its enabling the operator to remove the tonsil with one hand only.

3. The fact that when the instrument is in the grasp of the two forefingers and thumb, it may be applied to the tonsil (either right or left), and while the knife is thrust forward by the thumb, the double fork (as seen in the wood-cut) is brought into action, seizing and elevating the tonsil sufficiently for its removal.



PHILADELPHIA
MEDICAL TIMES.
 A WEEKLY JOURNAL OF
 MEDICAL AND SURGICAL SCIENCE.

The Philadelphia Medical Times is an independent journal, devoted to no ends or interests whatever but those common to all who cultivate the science of medicine. Its columns are open to all those who wish to express their views on any subject coming within its legitimate sphere.

We invite contributions, reports of cases, notes and queries, medical news, and whatever may tend to increase the value of our pages.

All communications must bear the name of the sender (whether the name is to be published or not), and should be addressed to Editor Philadelphia Medical Times, care of the Publishers.

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SATURDAY, JUNE 28, 1873.

EDITORIAL.

CHEAP!

"JOHN," said in our hearing an acquaintance old in experience and rich in this world's goods, when speaking to a young nephew about a certain scheme which it was thought would redound to the credit of those identified with it,—"John, never thee mind the credit; thee look after the cash." Remembering this incident, we have been tempted to pry into the cash account of the Philadelphia Hospital, and desire has been warmed into action by sundry eulogiums we have recently heard pronounced upon the economy with which the institution is managed. As a student and physician, not rarely have we trod its halls; and, calling to mind its stairs half worn away by the tread of misery, its floors whose gaping cracks and seams offer inviting resting-places for contagion, its wards whose naked dreariness speaks of the work-house, we are ready to acknowledge that, if economy and poverty are synonymous, Philadelphia Hospital has the most economical appearance it has ever been our lot to witness in an institution of such character.

We have gone further, and, examining its financial statistics, found that the average cost of patients per week was, in 1869, \$2.46; 1870, \$2.49; 1871, \$2.65; 1872, \$2.53.

In this are included food, clothing, light, heat, nursing, medical attendance, a priest to shrive, a coffin to lie in, a grave to rest in,—all for \$2.50 a

week! Certainly this is cheap. Pleasant—is it not?—for the tax-payer.

No one who has ever been in the Pennsylvania Hospital at meal-time would complain that the patients there are over-fed. No one who has personal knowledge of its honored steward would assert that he is extravagant in ideas, or not well skilled in practical economics. Yet there the average cost of patients is a little under \$7.50 a week. Seven dollars and a half versus two dollars and a half! Certainly there is a difference,—a difference which becomes more marked when it is remembered that in the Pennsylvania Hospital the patients wear their own clothes, but that in the Philadelphia Hospital they are furnished with others.

Taking the year 1869, because at present writing its report is the only one at hand, we find that the average cost of food in the Philadelphia Hospital was per week \$1.40; twenty-one meals, 63/4 cents a meal, including beef-essence, milk, eggs, and all other forms of extra diet. Six and three-quarter cents a meal for the patient consumed with fever! Six and three-quarter cents for the sewing-girl exhausted with toil and daily struggling! Six and three-quarter cents for the debauchee broken down with excesses! Six and three-quarter cents for the frame wasted with the hectic of phthisis! Six and three-quarter cents for the men and women pouring out their life from chronic abscesses, struggling to pass a certain point as a ship in a storm upon a lee shore struggles to round a promontory beyond which lies smooth water! One fi'penny bit for life! Certainly this is cheap. Pleasant—is it not?—for the tax-payer.

Man of wealth, dining sumptuously every day, wasting your strength with the rich viands of luxury, twenty cents per day is what the city of Philadelphia allows for the sustenance of the sick and dying in the only hospital which is freely open to receive all those who, mayhap in the midst of honest toil, are stricken with disease, and who, being dependent upon their daily work, are, when disabled, nothing but paupers in the eyes of this Commonwealth.

In our obtuseness it has occurred to us, however, that may-be the economy is more apparent than real. We have reasoned in this way. If a rheumatic patient takes cold and suffers relapse from insufficient clothing, what difference does it make if you have saved half a dollar by keeping him without a flannel shirt? If a chronic diarrhoea becomes incurable from want of suitable diet, and the patient remains a permanent inmate, where is the economy? If a fever case drags its convalescence for want of proper nourish-

ment, how is there a saving for the tax-payer? In a word, as no man in his senses, imbued with any regard for the truth, would assert that hospital patients can be properly fed in Philadelphia on six and three-quarter cents a meal, to protract convalescence—to convert an acute case into a chronic one by improper nourishment—seems to us no economy.

SINCE the above editorial was in type, we have heard some complaint against the one on the Philadelphia Hospital which appeared in our issue of June 14. Especially have we been asked, What are you driving at? Why not state plainly what you mean? Well, we did try to speak plainly, as far as we went. We did try to say forcibly that the practical daily government of the hospital is not centred, as it should be, in one person, but is left to a number of subordinate officers, who from the very nature of the case are incapable of managing the institution, and who, in practice, are not even bound by the printed rules of the house.

Some have construed our editorial—unjustly, we think—as bearing hardly upon the *present* resident physicians. Any such intention we entirely disclaim. According to the unanimous voices of their superiors, they are able, faithful, and self-sacrificing. We did mean to assert that, in such a staff, annually chosen for a term of months, there must be, from time to time, all sorts of characters; that all of the staff are, of necessity, inexperienced; and, further, that the printed rules for their government are, as they long have been, practically a dead letter.

The space allotted to editorials in our journal is too small for us to display in a single number the many shortcomings of the Philadelphia Hospital. This can only be done by a series of articles. We can, however, in a few lines, make definite charges, each capable of forming the basis of an editorial of some length. Let us at present arrange a few new ones, as follows:

1. That the sick poor are degraded morally by being regarded as paupers,—uniformed as such, and by being forced into the closest association with paupers.

2. That the food of the Philadelphia Hospital is not what it ought to be for hospital patients. This we have tried to show in to-day's issue.

3. That the nursing and attendance, although improved of late, are insufficient.

4. That, whilst some of the wards are comparatively airy, others are so unfit for their purposes

that no language seems too strong to denounce them in.

5. That in winter the wards are frightfully overcrowded,—not merely the regular beds being filled, but numbers of the patients being forced to lie upon the floor.

IN calling attention to long-standing abuses, it is impossible to avoid hurting the *amour-propre* of some one. In the present instance we desire to state plainly that the fault does not lie with the governing or medical board, or even indeed with the City Councils, but rather depends upon the erroneous idea which underlies the whole matter, that the city hospital is an institution for paupers, to form a part of an almshouse and to be governed as a workhouse.

The present system has been handed down through successive generations of guardians; each man when first elected perhaps resisting the current, but soon yielding to the general opinion that the place is good enough for paupers, and finally settling into the belief that the Philadelphia Hospital is a great and blessed charity.

So far as they have known, we believe that the hospital committee have tried to do their duty: the executive of an improper organization, they are powerless to overcome the faults inherent to the system. As constituted to-day, the committee probably has more knowledge of the wants of a hospital and a clearer appreciation of the existing evils than ever before. Their honesty of purpose is beyond dispute. The attention to their duties given by all of the members is great, and the sacrifice of time and labor on the part of some of them merits the highest praise. Indeed, our utter despair for the future of Philadelphia Hospital, as now constituted, rests largely upon the conviction that although the committee fails to accomplish anything of moment, its *personnel* is of such high character that any improvement of it is most improbable.

We know that various attempts at reform have been made by the governing committee and by the medical staff during the last few years; but we know also that the improvement really achieved amounts to very little, and are sure that the only solid basis for improvement in this case is *revolution*,—a complete separation of the hospital from the almshouse; a recognition of the cardinal fact that a man disabled by sickness, even if brought upon him by vice, is yet a man to be nursed, attended, cured, and to be restored as a useful citizen to the state.

AT the risk of wearying our readers, we reiterate that the articles on the Philadelphia Hospital which have appeared in our columns have been written solely and purely to call, if possible, public attention to a matter which most pressingly needs it. We have no fault to find with the governing board or officers of the institution. With the amount of money placed at their disposal, with the system which has prevailed since time immemorial, we believe the best results that can be are achieved by the Board of Guardians. For the credit of our city abroad, for the sake of the suffering poor, in the name of Christian charity, we do and shall continue to plead for a complete change in the system, for the organization of a disciplined, creditable hospital,—separate and distinct from the almshouse,—a house of refuge, whose wards shall indeed be temples of blessing to the sick and the weary.

To the present Board of Guardians above all do we appeal that they aid us in laying the whole matter before the community, and in informing public opinion, that it may justify City Councils in making the increased appropriations without which no improvement of moment is possible.

We do not think that we have in any wise put the truth in too strong a light; we do not think, indeed, that we have laid bare all the evil: if, however, in the opinion of any one having knowledge, one unjustifiable word has been said, our columns are open for communications upon the subject.

THE Committee on Reform and Retrenchment reported to the City Council, on Thursday, June 19, a bill for the sale of the present Almshouse farm, and removal of the Almshouse to a position near the present House of Correction. The bill was postponed by Councils until Thursday the 26th, and, as the meeting of that date is the last of the season, and the matter is too important for hasty action, probably nothing will be done until fall. Any discussion of the bill at this time would, therefore, be premature; and we content ourselves with saying that, if proper measures be adopted, in this movement will be found the cure for the troubles we have spoken of.

THE VACANCY AT THE JEFFERSON COLLEGE.

WITH a smile that is childlike and bland, our friend the editor of the *Medical and Surgical Reporter* rises (issue of June 21) to explain to the admiring Board of Trustees in the Jefferson College

their duty in regard to the vacancy in the chair of anatomy. With the sweep of the well-used and well-abused weapon, the cry of nepotism, he chops off the head of one of the prominent candidates; with faint praise he lays low another; with absolute ignoring he covers the third; and then in the strong light of his favor he holds forth his candidate as the man among men.

We have always had a respect for clannishness,—for the loyalty to kindred which prompts a man to aid those in whose veins flows blood like unto his own. But when the editor of a medical journal, in his public capacity, allows himself to carry the principle into his editorial columns, or even to appear to do so, he certainly throws himself open to censure, and in most cases damages the candidate whom he would help.

Except in very rare instances, a medical journal has, we hold, no business to interfere in a canvass of this kind, much less to insinuate that nepotism may influence the appointing board.

If any one candidate stands out pre-eminently above the rest, if the unanimous voice of the profession be in favor of one man, it may be the duty of a journal to speak in behalf of its constituents; but on an occasion like the present, when the alumni and the faculty of the college are divided in their choice, when the availability of the various candidates is such that it is a matter of individual opinion as to who is the best man, any journal that attempts to direct the various currents into one channel simply injures its own influence, if it possess any.

In conclusion, we wish to say one word in regard to "nepotism,"—a word which we would leave unspoken did we not know that ere it reaches the reader's eye the election will have been decided. If a man build up a business in ordinary life, it is the universal and just custom, when age or sickness overtakes him, to hand it over to his children. A position in a medical school differs, it is true, from a private business, but not so absolutely as some contend. The prosperity of almost every school rests upon the reputation and exertion of at most two or three professors; and we believe it to be nothing but common justice that when this has been the case such professors should have a claim upon the school for their children,—a claim which should not be paramount, but which should not be lost sight of; a claim which should not interfere with the election of a man superior to the son of a professor, but which should always give to that son the advantage, provided he prove himself the equal of his competitor.

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Not being in any sense on the inside of the canvass, we have not the slightest idea who will be elected this afternoon; but we shall keep back the issue of our journal so as to inform our readers. Editorially, we are for the best man; but we consider it the duty of the trustees of the Jefferson College—not ours—to decide this knotty question. As to probabilities,—like the Irishman at the “Limerick races,”—“two to one that the foremost horse wins.”

CORRESPONDENCE.

THE following letter was handed us by a prominent practitioner, to whom it was sent by one of his patients. We would call especial attention to it, because we are well convinced, from some experience, of the truth of much that is said in it:

DEAR DOCTOR,—Thanks to a kind Providence, I feel myself now at last so well that I am able to answer some of your questions. I mean besides to give you the conclusions I have come to after being an inmate of three asylums, and I venture on this because I was so long near well as to have for many months as good power to see what went on, and to judge of things, as any one not a doctor. I meant at first to speak out about each asylum, but in all of them I had great kindness shown me, and I have been told that if I name them I shall do them harm, and keep people from being sent to them, to the loss of both sides. If what I say here is unreasonable or foolish, do not print it. If it is not, I would like done with it whatever can be for best to such as are the miserable sufferers I have been. I have talked with many insane people, and found that they, many of them, have physical pains or annoyance which are not much looked after in asylums, and I am sure that in two of those where I went I never had such a thorough overhauling of my chest, and heart, and stomach, and head, as my outside doctors have given me. I was surprised to find lately that examination of urine is necessary, and know that no one ever in these places did look at mine. Asylum doctors cannot be much blamed; because where I have been there was always too few doctors, and the youngest ones were always going and coming. Even if a doctor lives among crazy people constantly he must tire of their complaints which so many are false, and therefore must get heedless of real ones. My remedy would be to get one or two good doctors outside to come once a week and see cases, and perhaps they would be fresher to see into the body ailments.

I saw in asylums many persons who were harmless, and who I guess would be more happy at home, and sometimes were really incurable. I suppose that if the cause of a man's madness was in what surrounded him at home he ought to be away from it; but if this is not

so, why must he be in an asylum unless he is so handled by his disease as to be dangerous?

It may seem a little thing, but I used to have at home a great variety of eating, and in one asylum, though food was plenty, it was coarser than people well-off at home are accustomed to, and it was not various. Perhaps if the visiting doctors could come in at meals now and then it would be a good thing. As to managers, they come out on set days, and know very little of all that goes on.

The worst complaint I can make is about what kept back my recovery a long while. I saw in asylums many people who were just so far well that the monotony of their lives was dreadful. You can't amuse a man all the time; and if a man has been a hard worker, as he gets better he ought, as I think, to be put to work. I would say, do so much labor of one kind or another each day, and if you do it you will have certain privileges, better diet, or moderate use of tobacco, if wanted, or a ride outside.

I was a long while just so that if I had had a reason to work I would have gladly done it, in a garden or field. Cannot this be carried on as a system in some asylum? No one but a nearly sane man knows what it is to have to walk about with more crazy people all around, and to have just games and the like to fill his day up. My own feelings would make me think that good hard labor would help some people as they get better.

I am sensitive about my name being known, but I should not be sorry for you to publish this if it will do any one good.

Yours, truly and respectfully.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY, NEW YORK.

SEMI-MONTHLY MEETING, May 28, 1873.

Reported by JAMES S. BAILEY, M.D.

DR. ALBERT VAN DERVEER, PRESIDENT, in the chair.

BY request of the Common Council, the Society met to discuss the propriety of using the waters of the Hudson for city purposes.

The PRESIDENT opened the meeting by stating the subject for discussion, and remarked that it was one of grave importance to all. They had met, not to compare the water of the Hudson with other sources, but to decide as to the fitness of the river-water for culinary and drinking purposes.

Dr. LEVI MOORE remarked as follows: “Mr. President, the question before this Society is one of great importance. • We are asked as physicians if the water of the Hudson River is good in a sanitarian sense. The hygienic aspect is the only one for us to consider. I trust that whatever action we shall take will be prompted by a sincere desire to secure to the public the greatest possible immunity from the germs of enteric and other diseases which we are so often able to trace to the use of impure, tainted, or sewage water. Whatever experts may say in commendation of sewage water,

even when largely diluted with purer water and taken from a rapidly moving current, although it may be clear and sparkling and possess no unpleasant taste or smell, yet the common instincts of our nature repel it as unfit for domestic use.

"I need not bring to the attention of this Society instances where typhoid fever, cholera, dysentery, and other diseases have been clearly traced to the use of impure or sewage water. These cases have been too numerous and too well authenticated to be doubted. The germs of disease are often too minute, too subtle, to be weighed in the chemist's balance, or to be detected by his most careful analyses. Because he cannot detect any death-dealing poison in the limpid fluid, does he therefore presume to say that there is none, and that the water therefore is wholesome and good? Because the continued use of small doses of an active poison does not kill at once, is it any the less a poison?

"My own conviction is that the water of the Hudson River is entirely unfit for domestic use, receiving as it does the sewage of our city, and, within ten miles to the north of us, the sewage of the cities of Troy and Cohoes, and the village of West Troy. All this sewage, together with that from the villages on the Upper Hudson and Mohawk, flows past our city and mingles with the sewage which is here poured into the river. I see in the not distant future a dense population, double, quadruple, the present number, in the manufacturing city of Troy and in the young city of Cohoes, with its matchless water-power. West Troy will have its population largely increased, and the beautiful hill-sides between that point and this city are yet, I believe, to be thickly populated. All this drainage will flow into the Hudson River only a few miles above us, tainting its waters and rendering them each year more and more unfit for domestic use. It is a notorious fact that even now the drainage from a large and rapidly-increasing population flows into our present source of supply. This should be remedied at the earliest possible moment. The very fact that it has continued till it has become so serious a matter shows culpable carelessness somewhere. This Society should take such action as the importance of the subject demands."

Dr. W. G. TUCKER read a paper on the analysis of river-water. "This," he said, "contains organic matter generally in much greater proportion than spring-water does, because of the surface-drainage passing directly into rivers. Inorganic matters which they contain are of little moment except as they affect the hardness of the waters. Organic matters, from various sources, are diffused through the water, and, being brought into contact with the oxygen contained therein, gradually change into carbonic acid, ammonia, nitrates, and nitrites. Thus the oxygen in water plays an important part in the purification of water. This is especially important where rivers receive, in addition to surface-drainage, a large amount of sewage from towns, and in hot weather, especially, this natural process of purification is inadequate to prevent a putrefactive change.

"The wholesomeness of water appears to be intimately connected with its state of aeration, as the proportion of oxygen is liable to be lessened by the decomposition of organic constituents.

"Thames water was examined at various points by Miller, and the proportion of oxygen contained in it ten miles above London was normal; three and three-quarter miles below it was very greatly diminished, and fifteen miles below it was very much restored to its natural condition, though not entirely. This was due to the pouring into it of organic matter from the city, to the destruction of which oxygen was necessary. These examinations show that water is wholesome much in proportion to its degree of aeration.

"Hudson River water was examined by Dr. Tucker by what is known as the permanganate test, which is based on the oxidation of organic matters, this being preferred as the most delicate. During October and November last he made several examinations, with the result that about four-tenths of a grain was liberated to oxidize the organic matter in one gallon; city water examined at the same time required one-eighth of a grain per gallon. Early in February, river-water required sixteen one-hundredths of a grain, city water seven one-hundredths; in April, thirty-three one-hundredths of a grain was required for river-water; city water was not tested at this time.

"Prof. Nichols, of Troy, examined, by the same test, water from the river above Waterford bridge, and that in the Troy reservoir, and found a proportion in favor of the latter of 1 to 4. Other properties of the river-water are a yellowish-brown or green color; it is turbid, with considerable sediment on standing; it contains ammonia in traces; its hardness is 3.9 degrees, city water averaging 5 degrees. Prof. Maynard, of Troy, found 4.94 grains of solid matter per gallon, 1.08 grains being organic; and he expresses the opinion that the waters of rivers receiving sewage are unfit for domestic use.

"The examination of water made by Prof. Chandler, Dr. TUCKER said, "does not fairly represent the character of the water, because the sample was taken from under the ice in the latter part of the winter, when, being at a low temperature, it would hold less in solution than during the summer. There is also at that season much less opportunity for foreign matters to get into the water. Prof. Chandler's report gave, however, at this season, seven-tenths of a grain per gallon of organic matter."

Dr. TUCKER believed that taking river-water for a city supply involved a great risk. A single analysis is not sufficient to determine the purity of the water, but it must be examined at different seasons, states of the weather, and stages of the river. The examinations already made do not warrant its use.

Mr. G. MICHAELIS, by a vote of invitation, remarked as follows:

"Gentlemen:—It is not the place here, to give you a review of the chemical and mechanical properties of the water; it is another point altogether which we have to take in consideration, and that is the purity or impurity of it.

"All waters, river-water as well as well-water, are powerful solvents of the ingredients of the soil, and contain therefore a variable quantity of the salts which are frequently found in it. They are principally chloride of sodium, sulphate of lime, magnesia, salts, and so forth, which give the water, especially when it contains carbonic acid, a refreshing taste, and there is no doubt that they have a healthy influence on the human body.

"But all waters, no matter whether river- or well-water, contain more or less organic matter, and it is supposed, to a certain point certified, that the latter is obnoxious to the human body, and produces sickness. The sources wherfrom the organic matter in rivers come are well known; they are, principally, the sewage and manure of the towns and villages through which they flow, consisting of almost everything, urine, faeces, dead animals, and the decay of the plants of the stream. A water thus impregnated is undoubtedly not very healthy.

"On the other hand, speaking of well-water, we must state that wells in cities are very quickly spoiled by infiltration of manure, and thus become bad.

"I made an experiment which showed this in the spring of 1866, when cholera was imported from Russia to Germany. This raised general alarm throughout the country, and more so since some prominent physicians

supposed that the ground-water had something to do with the spreading of the disease. I was at that time in Posen, a city of about 65,000 inhabitants, in the chemical laboratory of Dr. Mankiwich, occupied as his assistant. This gentleman received an order from the city authorities to analyze the water of the city wells. A thorough investigation proved that nearly one-third were in a bad condition and entirely unfit for use, but some of the wells, even those with a large amount of organic matter, appeared clear to the eye, while others had a good taste and very little smell. An analysis made of the water of the river Warthe proved that it was in at least as good a state as the wells.

"We must understand that there are two distinctly different organic matters in the water: such are those dissolved in the water and those only mechanically suspended in it. The mechanically suspended matter can be easily eliminated by a careful filtration, as filtering through gravel or sand and charcoal, but the greater part of organic matter is dissolved in the water and cannot be separated by mere filtration. It is beyond doubt that the dissolved organic matter is the source of the bad odor and the yellow, brownish color. Pure water is colorless. Now, the question is, whether there is a possibility of eliminating the dissolved organic matter or not. This question was satisfactorily answered by Prof. Medlock. This gentleman was requested in the year 1856 by the Amsterdam Water Company in Holland to analyze their water and to find the cause of the bad smell and fishy taste. (I wish you to understand that the water in Amsterdam is let through iron pipes.) Medlock received five samples of water for analysis, four of them from pipes in the city, and one before the water entered the reservoir of the company.

"In the water from the works before it came in contact with the iron reservoir and pipes, this chemist found 0.95 grains of iron, while in the other samples the iron was reduced to an unweighable trace: thus, instead of taking up iron from the service-pipes, it was not alone diminished, but even all precipitated. Notwithstanding the almost entire precipitation of the iron actually in solution in the water which had passed the iron pipes, it formed an objectionable red deposit on standing, while the water from the works before entering the pipes, holding in solution nearly one-half grain of iron per gallon, formed no deposit. He examined the deposit chemically and microscopically, with the following result: On ignition the precipitate charred and was almost entirely consumed, showing that it consisted of organic matter; under the microscope the deposit was seen to consist of plants in various stages of decay; many of the fibres had even retained a perfectly organized structure. He remembered the important fact established by Schönbein, that copper and platinum can convert ammonia into nitrous acid, and he found that iron also transforms ammonia into nitrous acid, and by further investigation he found that strips of sheet iron placed in water containing ammonia or organic matter capable of yielding it act almost as quickly and well as the metal in a finely divided state.

"Now he made different analyses with water brought in contact with iron, and water in no contact with iron, and the result was, that while the water which was not brought in contact with iron contained 2.10 organic matter and 0.96 iron, the other contained only an unweighable trace of both, which showed plainly that the organic matter contained in the water was either decomposed or thrown down (rendered insoluble by contact with iron); and actually this water when filtered was clear, of good taste, had no smell, and was free from organic matter.

"All organic matter either contains nitrogen or is non-nitrogenous. The latter consists almost always of carbon, oxygen, and hydrogen, and is very quickly, as

soon as it is no more under the vital influence, converted into carbonic acid and water. The nitrogenous matter is mostly of animal origin, and consists of nitrogen, oxygen, hydrogen, and very often sulphur and phosphorus, and is dissolved or suspended in water, very rapidly decomposed into gases very offensive to taste and smell, and undoubtedly very obnoxious. But all these are immediately destroyed by the presence of nitrous acid. Medlock proved, as before stated, by a series of subsequent analyses, that iron produces nitrous acid by its action on the nitrogenous organic matter, which is the most destructive power nature has. Must Pratt calls it 'Nature's scavenger.' This chemist found as a general result that by allowing water to be in contact with a large surface of iron, in about forty-eight hours every trace of organic matter was either destroyed or rendered insoluble, in which state it could be purified effectually by filtration.

"I did the same way with our Hudson River water, and obtained the same results. After subjecting the most filthy water to the influence of iron sheets for forty-eight hours, I found that it was almost entirely freed of all organic matter.

"I submit to the honorable Society some samples of Hudson water which I treated in a similar manner; and it can be easily seen that the iron sheets have had some influence on it: there is a decided deposit.

[Specimens of water treated with iron sheets, which appeared to be perfectly pure, were exhibited.]

"It would be perhaps of some value if similar researches should be made, and, in case the results should be favorable, it would not make any difference wherefrom we receive the water, as long as we are able to purify it in such a manner as to render it a wholesome beverage for the community.

"The experiment shows the existence of organic matter in the river-water."

Dr. SABIN said that analyses which had been presented showed the water opposite the city not sufficiently pure for use: he thought the best plan was to take water from the river just below the State dam above Cohoes and Green Island. At this point it is purified by running over the dam. He proposed that a large well be sunk at this point; that it be stoned up at the bottom with loose stone within ten feet of the top, the rest being cemented and built above high-water mark. By this means water will be taken from the bottom of the river, and also filtered, while the top floats off.

Dr. WILLIAM HAILES spoke of experiments which had been made to purify water, showing it to be a fallacy that water is purified by flowing over a dam. Pure water mixed with fecal matter in vessels, and poured day after day over a rough board, allowing it thereby to be most intimately mixed with air, at the end of two weeks was still found impure. It is also a fallacy that digging wells and so filtering purifies water, as it has been proved that filtering does not purify it. The germs of disease are not removed by it. He thought that river-water here, and even at the State dam, is unfit for use.

Dr. CROTHERS followed in an admirable address, for which we have not room.

Dr. JAMES S. BAILEY remarked that he had been much interested in what had been said, especially in the careful analyses of the chemists; but it had occurred to him that they might be more technical than practical. The air we breathe might, by analysis, prove to contain deleterious elements, but still we live and apparently enjoy health. So with river-water; it undoubtedly contains organic matter, but when taken into the stomach does not prove deleterious to animal economy. He had known persons—in fact, whole families—to drink river-water constantly with impunity, and from South-

ern waters, which were known to be more deeply impregnated with earth and vegetable matter than the water of the Hudson. He had known families to use water from stagnant pools covered with green scum, by brushing this aside, and the water, when used, did not produce unhappy results. There are processes in nature—chemical processes, really—by which water is purified, which is exemplified in the commingling of the waters of the Mississippi with those of the Ohio at Cairo, one coming from the limestone country, and the other laden with earthy matter, which when united had the desired effect of producing a chemical change, in fact, a filtering process; and it is a fact well known by river-men that water in this vicinity is unusually pure and wholesome.

The city of New Orleans is supplied with river-water, and it is known to be one of the healthiest cities in the Union, aside from epidemic influences; and by way of illustrating the turbid character of the water he would say that when last passing through that city he wished to enjoy the refreshing influence of a bath. After finishing, he had a desire to see how much impurity it contained, and was surprised to find a deposit of two inches of mud in the tub after the water was drawn off. Alum was used there to deposit the sediment.

Dr. CRAIG said the Hudson River water had been used for very many years for drinking purposes; ships going to sea came up into the Hudson River and took their supply. He said the Hudson River contains a volume of water four times as large as the river Thames, and the city of London is supplied from the latter. He thought the Society should not be hasty in its judgment, or too ready to condemn the source of supply.

Dr. DAVIS remarked, "The statement made here this evening that river-water has been used with impunity, and is therefore innoxious and wholesome, reminds me of accounts given by travellers of some barbarous tribes who habitually eat their food in the most offensive state of putrefaction and decay. Civilization, with its over-tasked brain and nervous system, can never withstand such vile and unwholesome food. No more can we long endure the baneful influence of river-water filled with putrescent vegetable and animal substances drained from an extensive region of country, and to which is added the sewage of cities holding in solution vital and putrefactive animal poisons, without subjecting ourselves to the natural and inevitable consequences of taking into our systems those active morbid agents which have ever proved most destructive to humanity. The rivers are the common receptacle of every unclean thing; and when the shores are covered with the dense population of large towns and cities, the sewage of every dwelling, prison, hospital, and sick-room is mingled in the general mass of its impure waters, containing epidemic, contagious, and infectious elements. Chemistry has its range and its limits, and has never been able to detect those attenuated and subtle principles that produce the desolating ravages of cholera, cerebro-spinal meningitis, smallpox, fevers, and numerous other diseases; and yet than their existence no truth in the whole history of medicine is better established.

"I hope this Society will place upon it their disapprobation, and will express with emphasis their answer, No."

On motion, it was decided to continue the discussion at the semi-annual meeting to be held on the 10th of June.

THE PULSE OF VARIOUS ANIMALS.—Vatel, in his "Veterinary Pathology," gives our domestic animals the following pulse: Horse, from 32 to 38 pulsations per minute; ox or cow, 25 to 42; ass, 48 to 54; sheep, 70 to 79; dog, 90 to 100; cat, 110 to 120; rabbit, 120; Guinea-pig, 140; duck, 135; common fowl, 140.

REVIEWS AND BOOK NOTICES.

A GUIDE TO URINARY ANALYSIS, FOR THE USE OF PHYSICIANS AND STUDENTS. By HENRY G. PIFFORD, A.M., M.D., Physician to the Charity Hospital, to the New Dispensary for Diseases of the Skin, etc., etc. 8vo, pp. 88. New York, William Wood & Co., 1873.

We are glad to welcome this manual with the same hope expressed by the author in his preface, "that the simple and easy manipulations described may encourage the more frequent and more thorough investigation of the urinary secretion," although it contains little that is not elsewhere published. We have good reason to know that the accurate investigations implied in a knowledge of these manipulations are rather distasteful than otherwise to the average American student; for we have attempted to teach them in a large medical school, in which, however, attendance on the course was not compulsory to the class, and have sometimes found ourselves teaching to almost empty benches. Not until by preliminary examinations we sift the wheat from the chaff will the average medical student seek any further instruction than such as will aid him in his final examination.

The book is convenient in form, and the processes described are in the main reliable. We cannot believe, though, that the author has had much experience in testing for the bile-acids, or he would not have been so brief in his treatment of this subject. It is true he says that sometimes the bile-acids may be detected in urine by Pettenkofer's test directly applied to the suspected urine. In many trials we have never been able to prove the presence of the bile-acids in urine by the direct application of Pettenkofer's test, even when we have added human bile to the urine previous to testing. The bile-acids must first be extracted and obtained in colorless solution, either by evaporating to dryness, extracting with absolute alcohol, precipitating with ether, redissolving in distilled water and decolorizing with animal charcoal, or by the still more accurate methods of Hoppe-Seyler and Gorup-Besanez, before Pettenkofer's test can be applied.

Containing seven chapters, the first is the introduction, the second describes apparatus, the third reagents and standard solutions, the fourth color, reaction, specific gravity, and estimation of solids, the fifth estimation of normal constituents, urea, uric acid, etc.; sixth, abnormal constituents; seventh, the detection of medicinal and other substances in urine, including iron, lead, and mercury.

We would have confined ourselves to the metric system of weights and measures; for it is only by persistently adhering to it, and as persistently ignoring the English system, that scientific men can expect to secure its ultimate adoption. The book should be in the hands of every American practitioner and student.

THE COMPARATIVE MERITS OF CRANIOTOMY AND THE CÆSARIAN SECTION IN SMALL PELVES. By J. S. PARRY.

This is a reprint of Dr. Parry's paper read before the Philadelphia Obstetrical Society, and published in the *American Journal of Obstetrics* for February, 1873. A more clear, searching, and practical paper has seldom been read before that body. Its text—a case of delivery by craniotomy through a pelvis of one and a half inches antero-posterior diameter, at the Philadelphia Hospital, by the author—is told in forcible and graphic language, and followed up by arguments and statistics which serve conclusively to prove the vast superiority of the Cæsarian section in pelvis below two and a half inches, and still more, if admitted, to make it obligatory on us, as an act of justice, to urge and insist upon

the performance of this operation in any such case which may fall into our hands.

Dr. Parry in his case found the cephalotribe of less use than its advocates would claim, and shows that, so far from obviating the necessity for Cæsarian section in many small pelvis,—below two and a half inches antero-posterior diameter,—its usefulness diminishes as the antero-posterior diameter falls below this measurement. In this opinion he is supported in an article recently published by Dr. Munde, in the *American Journal of Obstetrics*, May, 1873, where, drawing his experience from the Vienna schools, Dr. Munde advocates the use of a modified and enlarged cranioclast on account of this very difficulty of applying the cephalotribe. Dr. Munde, however, admits that he is unacquainted with the cephalotribe of Braxton Hicks; though we think this detracts but little from the value of his observations.

We are convinced, however, that somewhat more than unanswerable argument will be required to make the Cæsarian section the universal resort. The battle of ovariotomy will have to be fought again on many fields before the ordinary practitioner will give up craniotomy and adopt an operation which, where unsuccessful, leaves so many external marks of violence; lacerations of the uterus, penetration of the peritoneum, bruises and sloughing from undue pressure and traction, are concealed; seldom do prying eyes see the hidden injury; and then the euphemism of child-bed fever or its synonymy comes and covers all from those idle eyes and equally idle tongues. It takes time as well as conviction to bring about radical reforms, in practice as in everything else.

GLEANINGS FROM OUR EXCHANGES.

LEPROSY IN THE WEST INDIES.—The subject of leprosy in the West Indies, though it has, perhaps, excited less attention than in the East, has always been looked upon with interest,—an interest which the reported cures of what was considered an incurable disease by Dr. Beauperthuy by no means served to lessen. Dr. Gavin Milroy, at the suggestion of the Royal College of Physicians, was sent out by the Colonial Government; and it is from his report, which now lies before us, that we extract the subject of this notice.

Dr. Milroy appears to have first of all visited British Guiana, near the capital of which is situated the principal leper-asylum in the colony. This at the time of visitation contained two hundred and six patients, in all stages of the malady. Most of these were colored, only one European being found among them, and his case was a doubtful one. The facts here collected tended to establish the belief, already generally entertained, that the disease is not transmissible by ordinary infection. Leprous patients continue to sleep with those who are sound, and even sexual intercourse seems to have no power of communicating the complaint. Hence the belief that it arises from causes dependent on climate or food; and the belief has long prevailed that the extensive use of poor food, especially salted fish, in these parts, had something to do with its continuance and spread.

The forms of leprosy seen were of the tuberculated and non-tuberculated kind. In some the anaesthesia had been so strongly marked as to occasion injury to the hands in cooking their victuals, no intelligence being conveyed of the sensation of over-heat even by the burned fingers. Most of the cases seen under the care of Dr. Beauperthuy were in the earlier stages; those well advanced were rejected as unfit for treatment. Dr. Milroy in his inquiries was strongly impressed with the view that in many respects leprosy and scrofula were closely allied, and this idea was strengthened on find-

ing that in both Guiana and the West Indies leprosy went by the name of "king's evil,"—the old name for scrofula in this country. In both there is marked want of "power" or "tone," with feeble action of the heart, and an exsanguine condition of body. The ulcers, too, resemble those found in scrofulous subjects, and the well-known enlargement of the lymphatic glands in leprosy would probably be considered another point of resemblance. At the same time, the spread of scrofulous diseases in Demerara and the West Indies has recently been marked as decidedly on the increase.

Naturally, one of the most important inquiries we can make is as to the contagious character of the malady. On this point a sufficiently large accumulation of evidence has been made to enable us to come to some conclusion. It is true that in many parts of the West Indies and in Guiana the belief in the possibility of transmitting leprosy from one individual to another has been entertained; but a strict examination into circumstances tends clearly to the opposite belief. True, certain isolated cases have occurred where direct transmission may have been possible; but the mass of evidence undoubtedly goes to show that leprosy is not capable of communication even by sexual intercourse. It has been supposed that the inoculation of the blood of leprous patients might be capable of transmitting the malady; but in the case of a medical practitioner who cut his finger in an operation on a leprous subject, no such unfortunate result followed. He was unable to attend to his wound for a time, and, apparently as a consequence of this, erysipelas and destruction of the parts followed, so that the finger had to be removed; but no constitutional evil resulted.

But, if not contagious, how is the malady spread? On that, too, there seems a singular unanimity of opinion, if we may judge by Dr. Milroy's report. If not entirely caused, the malady is greatly favored, by the bad food and unhygienic condition of the lower orders, among whom the disease almost entirely prevails. In Demerara the aboriginal inhabitants, who lead healthier lives than the imported negroes, coolies, or the lower classes of the Creoles, do not suffer. Everywhere in these regions the diet of the poor seems to consist mainly of salted fish,—at no time a nutritious kind of food, and even then often inferior in quality. Sometimes a little salted beef or pork is added in the form of soup, but fresh meat is rarely, if ever, tasted. As the salt fish can only be looked upon in the light of a condiment to flavor the other constituents of diet, the negroes seem to favor the highest-flavored—i.e. the worst—varieties; though when they get the chance they are greedy after fresh meat. Invariably leprosy seems to be fostered in its onward progress by bad food, and retarded by better quality of diet. However, as matters now stand, there seems to be a difficulty in getting meat in the fresh condition. Sheep are imported into Guiana from New York or Boston, cattle from the Orinoco. Some are raised in Porto Rico, and many more might be so in Dominica. Meanwhile, the business seems neglected, and the poor suffer in consequence. For the same reason, milk is not readily attainable; and even the substitution of fresh fish for salt, though apparently easy, is not much carried out.

One great object of Dr. Milroy's mission was an inquiry into the possibility of curing this malady on the plan proposed by Dr. Beauperthuy. This gentleman founded his treatment essentially on the principles already laid down as to the causation of the disease. The first thing to be done was to improve the dietary. Whenever the food has been improved, the lepers have improved also, and this, too, without any other medicines being employed. For the means of making such an improvement Dr. Beauperthuy stipulated when he took charge of the trial made in Guiana. Internally he gave

one-eighth of a grain of corrosive sublimate twice a day, sometimes with a dose of carbonate of soda, and this was continued until the mercury began to show its constitutional effects, when it was replaced by quinine, and later by iodide of potassium. Unfortunately, Dr. Beauperthuy did not live to complete his work, which he seems always to have considered experimental, and not final, so that even his final conclusions were of necessity imperfect. Locally he employed almost solely cashew-nut oil, which was applied to the tubercles or anaesthetic spots. This oil is a powerful counter-irritant, and may give sharp pain. By it the epidermis is removed, and to the raw surface strong lime-juice is applied. This plan of treatment, according to Dr. Milroy, is decidedly encouraging. By it tubercles are removed and anaesthetic spots rendered sensitive. Dr. Milroy, however, decidedly objects to the too prolonged use of mercury internally. Dr. Beauperthuy is no more; but his good deeds live after him, and we cordially endorse Dr. Milroy's warm praise of a man who devoted so much pains to assist a class so proverbially outcast as the leprosy.

Dr. Milroy's report also contains some information as to the peculiar malady called the "Yaws," which, however, space forbids us in the mean time to reproduce.—*Medical Times and Gazette*, May 31.

MISCELLANY.

As we go to press, we learn that the trustees of the Jefferson College failed to elect a successor to Professor Pancoast. It is said that there were eighteen ballots, on the first of which Dr. William Pancoast received five votes, thirteen trustees being present. Subsequently Dr. William W. Keen obtained six votes. The closing ballot is said to have stood—Dr. Pancoast three votes, Dr. William S. Forbes six votes, Dr. Keen four votes. During the balloting Drs. Brinton and Hewson received some votes. The matter stands over until October. Professor Pancoast, we believe, is to be asked to lecture next winter.

THE terrible physical sufferings endured by the Parisians and shared by many unfortunate foreigners who happened to be within the iron belt during the siege of the Gay City by the Teutonic forces, have become a matter of history. Not so the mental horror which must since have preyed upon many a sensitive organization on perusing the recent account of the trial, in Paris, of a wretch for selling pies made of human flesh during the bombardment. Meat pies, even in times of peace and plenty, amidst a great centre of population, are at once a mysterious effort of perverted ingenuity, and a hazardous investment; although the worst usually said of them may be that feline or canine choppings form their chief ingredients. There is something so utterly horrible in cannibalism, even although inadvertent, and in the deliberate calculation of this Parisian monster, that we do not wonder his unnatural crime, in exciting the utmost loathing throughout France, has enveloped the perpetrator with crushing punishment.—*Food Journal*.

DR. David Page Smith, of Springfield, Mass., has been nominated to the corporation of Yale College for the professorship of the theory and practice of medicine, recently vacated by Professor Ives.

WEEKLY RETURN OF DEATHS AND INTERMENTS IN PHILADELPHIA FOR THE WEEK ENDING SATURDAY, JUNE 21, 1873.

DISEASES.	Adults	Minors	DISEASES.	Adults	Minors
Apoplexy.....	6	...	Hemorrhage.....	2	...
Burns and Scalds.....	...	2	" from Uterus.....
Cancer.....	1	...	Hooping-Cough.....	2	4
" of Lungs.....	1	...	Inanition.....	2	10
" Ovaries.....	1	...	Inflammation of Brain.....	2	...
Casualties.....	5	2	" Bronchi.....	1	...
Cerebro-Spinal Meningitis.....	2	12	" Heart.....	1	...
Cholera Infantum.....	15	...	" Liver.....	2	...
" Sporadic.....	1	...	" Lungs.....	4	2
Child-Bed.....	1	...	Peritoneum.....
Cirrhosis of Liver.....	3	...	Spine.....	7	1
Congestion of Brain.....	5	4	Stomach & Bowels.....	1	...
" Lungs.....	1	...	" Uterus.....
Consumption of Lungs.....	36	8	Mania a potu.....	1	...
Convulsions.....	1	11	Marasmus.....	1	12
Croup.....	...	3	Measles.....	...	1
Cyanosis.....	...	3	Neuralgia of the Heart.....	2	...
Debility.....	8	9	Old Age.....	7	...
Diarrhea.....	1	4	Paralysis.....	8	...
Diphtheria.....	...	4	Rheumatism.....	1	...
Disease of Brain.....	1	...	Smallpox.....	1	...
" Heart.....	4	1	Softening of Brain.....	2	...
" Kidneys.....	2	...	Sore Mouth.....	...	1
" Lungs.....	1	...	Still-Born.....	...	22
Dropsey.....	3	2	Suicide.....	2	...
" of Abdomen.....	1	...	Sunstroke.....	1	...
" Brain.....	...	4	Tabes Mesenterica.....	...	1
" Chest.....	1	...	Teething.....	...	2
Drowned.....	1	2	Ulceration of Bowels.....	2	...
Dysentery.....	...	1	" Lungs.....	1	...
Enlargement of Heart.....	1	...	" Esophagus.....	1	...
Erysipelas.....	1	1	Ulcers.....	1	...
Fatty Degener'n of Liver.....	1	...	Unknown.....	1	...
Fever, Catarrhal.....	...	1	Uraemia.....	2	...
" Scarlet.....	1	...			
" Typhoid.....	8	2			
" Typhus.....	3	...			
TOTALS.....				159	59

METEOROLOGICAL OBSERVATIONS TAKEN AT THE SIGNAL OFFICE, PHILADELPHIA, DURING THE WEEK ENDING SATURDAY, JUNE 21, 1873.

Month and Day.	Barometer, Daily Mean	Thermom., Daily Mean	State of Weather.	Rain. In.
JUNE.				
Sunday 15th	29.90	69	Cloudy.	...
Monday 16th	29.86	75	Fair.	...
Tuesday 17th	29.89	78	Clear.	...
Wednesday 18th	29.88	73	Clear.	...
Thursday 19th	29.77	83	Fair, Clear.	...
Friday 20th	29.76	84	Fair, Clear.	...
Saturday 21st	29.92	76	Clear.	...
Means	29.85	77

The surface of the cistern of Barometer is located 71.92 feet above the mean level of the sea.

Barometer corrected for temperature, elevation above sea, and instrumental error.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM JUNE 17, 1873, TO JUNE 23, 1873, INCLUSIVE.

MAGRUDER, D. L., SURGEON.—Granted leave of absence for sixty days, with permission to apply at Headquarters of the Army for an extension of thirty days. S. O. 55, Military Division of the Missouri, June 17, 1873.

WOODHULL, ALFRED A., ASSISTANT-SURGEON.—Granted leave of absence for twenty days. S. O. 124, A. G. O., June 20, 1873.

LIPPINCOTT, H., ASSISTANT-SURGEON.—Relieved from duty in Department of the South, and ordered to the Department of Arizona. S. O. 120, A. G. O., June 16, 1873.

DELANY, A., ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of the South, for assignment to duty. S. O. 120, C. S., A. G. O.

EWEN, C., ASSISTANT-SURGEON.—Assigned to duty at Baton Rouge, La. S. O. 95, Department of the Gulf, June 14, 1873.